IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:	)	Before the Board of Appeals
Kelly Molenaar	)	
Serial Number: 10/050,834	)	
Filed: January 15, 2002	)	Substitute Brief
Title: PREMIUM PERFORMANCE BALL JOINT AND SYSTEM	)	
Attorney Docket: MSH – 203	)	June 29, 2003

BRIEF ON APPEAL

This is an appeal from the Office Action mailed October 21, 2004, finally rejecting claims 1, 4 and 8. A Notice of Appeal was timely filed on January 21, 2005, with the accompanying fee.

Authorization to charge Deposit Charge Account 13-2492 for the Appeal Brief fee of $250.00 has been granted in the cover letter hereto. Appellant is a small entity, the verification therefor being filed with the original application.

(C)(1)(i) REAL PARTY IN INTEREST

The inventor herein and the assignee, Howe Racing Enterprises, are the real parties in interest of the application being considered in this appeal.

(C)(1)(ii) RELATED APPEALS AND INTERFERENCES

To the best of Appellant's knowledge, there are no appeals or interferences related to the present one which are likely to directly affect or be directly affected by the Board's decision in the pending appeal.

(C)(1)(iii) STATUS OF THE CLAIMS

Claims 1, 4, and 8 are the claims in this appeal. Claims 2, 3 and 5 to 7 stand withdrawn from consideration.

(C)(1)(iv) STATUS OF AMENDMENTS

Claim 1 has been amended and the amendment has apparently been entered by the Examiner. Claim 1 in the Appendix (C)(1)(viii) reflects that amendment. Claims 4 and 8 have not been amended from the original.

(C)(1)(v) SUMMARY OF CLAIMED SUBJECT MATTER

The ball joints of this invention (page 3, lines 14 to 24; Figs. 1,2; component 27) are premium performance racing ball joints, in that, all prior art ball joints use a mechanical means for applying pressure to the ball within the ball joint to accommodate wear as the ball joint is in use, while the ball joint of this invention has no such mechanical means, but relies on the use of lubricant grease pressure, resulting in minimal restriction in movement because of the reduction in friction. This "reduction in friction" provides a ball joint that is essentially "free-wheeling" within the housing in which it is contained. The prior art ball joints that are mechanically held create inconsistent amounts of resistance to suspension movement, most frequently around twenty pounds, while the ball joints of this invention have less than one pound of resistance.

Claim 1, lines 19 and 20 deal with a means for attaching the housing to a support arm of a suspension system. The means is described also in claim 4. The description in the specification can be found at page 6, lines 16, 20, page 7 at line 15, and in Figures 1, 3, and 6 as element 5.

Claims 1, line 21 deals with a fastening means for fastening the retaining member in the housing. The description in the specification can be found at page 5, line 6, page 6, lines 22 to 25, line 29, and page 7, line 15, Figure 1 as element 7, 8, 9, and in Figure 3, element 8, 9; Figure 6, element 9, and Figure 9, element 7.

(C)(1)(vi) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Rejection of claim 1 under 35 U.S.C. §103(a)

Claim 1 has been rejected under 35 USC §103(a) as being unpatentable over Mizusawa et al., 4,568,216 in view of Edwards, U.S. 2,559,857, the Examiner taking the position that all of the elements of the inventive device are shown in Mizusawa et al, except a means for lubricating which means is found in Edwards.

Rejection of claim 8 under 35 U.S.C. §103(a)

The Examiner has rejected claim 8 under 35 U.S.C. §103(a) as being unpatentable over Mizusawa et al, in view of Edwards, as applied to claim 1, and further in view of McEowen U.S. Patent 4,134,701.

Rejection of claims 1 and 4 under 35 U.S.C. §103(a)

Claims 1 and 4 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Scheublein, Jr. et al, U.S. Patent 2,954,993 in view of Scheublein, Jr. et al., U.S. patent 3,103,377, and Maughhan, U.S. Patent 5,564,853.

(C)(1)(vii) ARGUMENTS

Rejection of claim 1 under 35 U.S.C. §103(a)

Claim 1 has been rejected under 35 USC §103(a) as being unpatentable over Mizusawa et al., 4,568,216 in view of Edwards, U.S. 2,559,857, the Examiner taking the position that all of the elements of the inventive device are shown in Mizusawa et al, except a means for lubricating which means is found in Edwards.

The Appellant takes the position that the Examiner does not completely understand the instant invention. The references that the Examiner relies on deal with ball joints in which the balls are held in the housing using mechanical means while the device of the instant invention does not use mechanical means to hold the ball in the housing, but instead, uses the pressure of lubricating grease to maintain the ball in the housing.

The Examiner takes the position that it would have been obvious to one skilled in the art to combine the Mizusawa et al teaching about a ball joint device, with Edwards, to find the one element that is missing, that is, the lubricating mechanism.

The Appellant would point out to the Board that the Mizusawa et al patent teaches one skilled in the art about a ball joint that has its major parts manufactured from plastic, and the claims even require that certain parts be manufactured from plastic.

The specification of the '216 patent, at column, lines 62 to 64 points out that the ball joints of that invention are of the type that are predominantly used as gas-spring joints in the rear doors of automobiles, and that explains why the ball joints can be manufactured from plastics. However, it also explains why there are no provisions in the specification, drawings and claims of the '216 patent for lubrication.

The question to be asked then is why anybody skilled in the art would rely on that disclosure to seek out information with regard to ball joints that are to be used in automobile suspension systems, and further, why would any body even combine that disclosure with Edwards to gain information relative to lubrication?

Further, even if one did rely on the '216 patent, the '216 patent deals with a ball joint that is mechanically held. For example, there is a slip ring that is disposed in the lower part of the housing, below the ball of the ball joint. In addition, the tubular wall 13 is inserted downwardly into the cylindrical portion, and works in conjunction with the metallic ring, by compressing and expanding the metallic ring to hold the ball mechanically in the housing (See Figures 6 to 10, and lines 65 et seq. of column 6). In addition, in the particular Figure that the Examiner relies on (i.e. Figure 6), there is also shown the existence of triangular walls 28 that aid in the retention of the ball within the housing. Thus, one skilled in the art knows how the ball of the device of the '216 patent is held in the housing and why there is no need for lubrication. Given that information, why would one skilled in the art seek out Edwards?

Further, the specification of the instant invention discloses that the lubrication port of the instant invention is the means by which lubricants are added to the open space formed by the truncated ball of the instant invention and further, the instant specification makes it very clear that this is not just a means of lubricating the ball, it is a means of holding the ball in the housing without mechanical means. The instant invention is not disclosed in the references that the Examiner has cited or in any combination of the references that the Examiner has cited.

The advantage to be gained by the instant invention cannot be had by the use of the devices of the cited references. The use of a non-mechanical hold on the ball of the ball joint of the instant invention results in minimal restriction in movement because of the reduction in friction provided by the lack of mechanical holding means. This provides a ball joint that is essentially "free-wheeling" within the housing in which it is contained. The prior art ball joints that are mechanically held create inconsistent amounts of resistance to suspension movement, most frequently around twenty pounds, while the ball joints of this invention have less than one pound of resistance.

It is therefore the Appellant's position that the references have been impermissibly combined and cannot form a basis for rejecting the claims as the Examiner has done.

Rejection of claim 8 under 35 U.S.C. §103(a)

The Examiner has rejected claim 8 under 35 U.S.C. §103(a) as being unpatentable over Mizusawa et al, in view of Edwards, as applied to claim 1, and further in view of McEowen U.S. Patent 4,134,701.

Claim 8 is directed to a device of this invention that has, in addition, shallow channels within the interior wall of the housing for purposes of lubrication, and air venting around the ball itself.

McEowen has been added by the Examiner to show shallow channels in the lower end of the housing used as grease reservoirs. The applicant does not disagree with the Examiner with regard to the teaching of McEowen. However, the arguments and discussion surrounding the combination of Mizusawa et al and Edwards as set forth just above for claim 1, are equally applicable in this rejection. Without Mizusawa et al and Edwards, this rejection is not properly founded.

Rejection of claims 1 and 4 under 35 U.S.C. §103(a)

Claims 1 and 4 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Scheublein, Jr. et al, U.S. Patent 2,954,993 in view of Scheublein, Jr. et al., U.S. patent 3,103,377, and Maughhan, U.S. Patent 5,564,853.

Claim 4 deals with a preferred attachment means for the device that is external threads on the external surface of the middle portion of the housing.

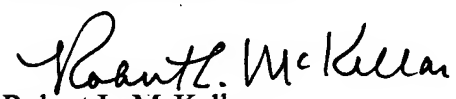
The references '377, '993, and '853, seem to deal with the use of external threads on the external surface of the middle portion of the housing for attachment means for the device. However, the Appellant takes the position that the arguments and discussion surrounding the combination of Mizusawa et al and Edwards as set forth just above for claim 1, are equally applicable in this rejection. Without Mizusawa et al and Edwards, this rejection is not properly founded.

With regard to the comment made by the Examiner at page 5, second paragraph of the Office action with regard to the truncated flat face of the Scheublein, Jr. et al, '933 [sic Scheublein, Jr. et a, '993] device, the Examiner is basing his supposition on the reason for the truncated flat face on " appearances". The Appellant would point out to the Board, that the Figure that the Examiner references does show a slightly truncated flat face on the top side of the ball, however, that Figure also shows the use of component 57

to mechanically hold the ball in place. The reference itself is devoid of a reason for the truncated flat face of the ball and thus, one cannot guess the reason for the truncated flat face and it certainly does not lead one to believe that the truncated flat face is part of that device for the purposes of disposing copius amounts of lubricant in order to keep the ball in place within the housing. From Appellant's perspective, it "appears" that the truncated flat face is sufficient to receive lubricant for lubrication purposes only.

For the reasons set forth above, the Appellant respectfully requests the Board to reverse all of the rejections of the Examiner.

Respectfully submitted,



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(C)(1)(viii) CLAIMS APPENDIX

1. (Currently Amended) A ball joint comprising in combination:

(i) an elongated shaft having an upper end and a lower end and having a longitudinal axis running through said upper end and said lower end, said elongated shaft being threaded on the lower end;

(ii) a ball rigidly fixed and surmounted on the upper end of the elongated shaft, said ball, at the highest point opposite the upper end of the elongated shaft, having a truncated flat face;

(iii) a retaining member having an upper surface and a lower end, said retaining member having a lubricating port located in the upper surface thereof, the lubricating port being openly connected to a duct, said duct providing a passageway for lubricants from the lubricating port to the truncated flat face of the ball, said retaining member being externally threaded on the retaining member lower end;

(iv) a housing having an outside surface, a middle portion, and a lower end, said housing being internally conformed at the lower end of the housing to seat the ball and provide pivotal movement about the longitudinal axis of the elongated shaft for the ball relative to the housing, said middle portion of the housing being internally threaded to receive the retaining member therein and said middle portion having a means for attaching the housing to a support arm of a suspension system;

(v) a fastening means for fastening the retaining member in the housing.

2. (Withdrawn) A ball joint system comprising in combination:

(i) an elongated shaft having an upper end and a lower end and having a longitudinal axis running through said upper end and said lower end, said elongated shaft being threaded on the lower end;

(ii) a ball rigidly fixed and surmounted on the upper end of the elongated shaft, said ball, at the highest point opposite the attachment of the elongated shaft, having a truncated flat face;

(iii) a retaining member having an upper surface and a lower end, said retaining member having a lubricating port located in the upper surface thereof, the

lubricating port being openly connected to a duct, said duct providing a passageway for lubricants from the lubricating port to the truncated flat face of the ball, said retaining member being externally threaded on the retaining member lower end;

(iv) a housing having and outside surface, a middle portion, and a lower end, said housing being internally conformed at the lower end to seat the ball and provide pivotal movement about the longitudinal axis of the elongated shaft for the ball relative to the housing, said middle portion of the housing being internally threaded to receive the retaining member therein and said middle portion having a means to attach the housing to a support arm of a suspension system;

(v) a fastening means for fastening the retaining member in the housing and,

(vi) a socket, said socket comprising a cylindrical housing having an internal surface said internal surface being threaded to receive the housing therein, said socket having a means of attachment for attachment near a terminal end of a carrier for the ball joint system.

3. (Withdrawn) An automotive suspension system wherein there is provided an upper ball joint system and a lower ball joint system as claimed in claim 2.

4. (Original) A ball joint as claimed in claim 1 wherein the means for attaching the housing to the support arm of the suspension system is external threads on the external surface of the middle portion of the housing.

5. (Withdrawn) A ball joint as claimed in claim 1 wherein the means for attaching the housing to the support arm of the suspension system is a flange that can be secured to the support arm by at least one detachable pin.

6. (Withdrawn) A ball joint as claimed in claim 5 wherein the pin is a bolt secured by a nut.

7. (Withdrawn) A ball joint as claimed in claim 1 wherein the means for attaching the housing to the support arms of the suspension system is a compression fit of the housing into openings in the support arms.

8. (New) A ball joint as claimed in claim 1 wherein the internally conformed lower end of the housing comprises plural shallow channels for receiving lubrication therein.

(C)(1)(ix) EVIDENCE APPENDIX

(not applicable)

(C)(1)(x) RELATED PROCEEDINGS APPENDIX

(not applicable)

PTO/SB/92 (09-04)
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